

WHAT IS CLAIMED IS:

Sub C3 1. A heating, ventilation, and air-conditioning (HVAC) system for a motorhome having an interior living area enclosed by interconnected coach panels, the HVAC system comprising:

a furnace unit;

an air-conditioning unit wherein the furnace and the air-conditioning units are adapted to be positioned below the interior living area of the motorhome;

a single air intake directing air from the interior living area to the furnace and the air-conditioning units.

2. The HVAC system of Claim 1, further comprising a filter positioned within the single air intake.

3. The HVAC system of Claim 1, further comprising a single outlet duct and at least one register in communication with the outlet duct directing air from the HVAC system into the interior living area of the motorhome.

Sub 4. The HVAC system of Claim 1, wherein the coach panels comprise a plurality of vertical walls and a roof.

5. The HVAC system of Claim 4, wherein the single air intake comprises inner surfaces of the coach panels.

6. The HVAC system of Claim 5, wherein the air intake comprises at least one of inner surfaces of coach panels and inner surfaces of interior trim panels of the motorhome.

7. The HVAC system of Claim 6, wherein the single air intake comprises at least two of adjoining inner surfaces of coach panels and inner surfaces of interior trim panels of the motorhome.

8. The HVAC system of Claim 7, wherein the common air intake comprises at least two adjoining inner surfaces of coach panels and at least two adjoining surfaces of interior trim panels wherein each adjoining coach panel adjoins one of the adjoining interior trim panels so as to define a box structure.

Sub C4 9. A motorhome having structural panels and interior trim panels, the motorhome comprising:

a frame defining a floor plane;

a heating, ventilation, and air-conditioning (HVAC) system wherein the majority of the weight of the HVAC system is positioned below the floor plane; and

a common air intake directing air from the interior of the motorhome to the HVAC system.

10. The motorhome of Claim 9, further comprising a common outlet duct and at least one register directing air from the HVAC system to the interior of the motorhome.

11. The motorhome of Claim 9, further comprising a single filter assembly positioned within the common air intake.

12. The motorhome of Claim 9, wherein the HVAC system comprises a furnace and air-conditioning unit wherein the furnace and air-conditioning unit are positioned below the floor plane.

13. The motorhome of Claim 9, wherein the structural panels comprise vertical walls and a roof.

14. The motorhome of Claim 13, wherein the common air intake comprises at least one structural panel or interior trim panel.

15. The motorhome of Claim 14, wherein the common air intake comprises at least two adjoining structural panels or interior trim panels.

16. The motorhome of Claim 15, wherein the common air intake comprises at least two adjoining structural panels and at least two adjoining interior trim panels wherein each adjoining structural panel adjoins one of the adjoining interior trim panels so as to together define a box structure.

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